

I claim:

1. A trailer for transporting a plurality of animals, said trailer having a floor with side walls that extend therefrom and a roof attached to the side walls to define an enclosed structure, said enclosed structure having a rear door for egress onto the floor and a forward door in at least one of said side walls, said floor being divided into a plurality of stalls by gate assemblies, said gate assemblies being characterized by a plurality of individual gates wherein each gate is connected to said side walls and movable from a horizontal position to a vertical position after an animal enters said enclosed structure through said rear door to create a corresponding individual stall for the animal and whereby each gate may thereafter be moved from said vertical position and returned to said horizontal position to eliminate said individual stall so that the animal may exit from the enclosed structure through said forward door.
- 15        2. The trailer as recited in claim 1 wherein said each gate is further characterized by being stored adjacent said roof when in said horizontal position.
- 20        3. The trailer as recited in claim 2 wherein said gate assemblies are further characterized by a plurality of first rails that are attached to a first side wall and a plurality of second rails that are attached to a second side wall, each rail in said plurality of first and second rails having a first section that extends in a vertical plane with respect to said floor, a second section that extends in a horizontal plane with respect to said floor and a third section the transitions from said first section to said second section, said first section of each rail in said plurality of first rails receiving a first roller arrangement that is attached to said each gate and each rail in said plurality of second rails receiving a second roller arrangement attached to said each gate, said first roller arrangement and second roller arrangement respectively moving in said first section, third section and second section of said first and second rails on movement of said each gate between said horizontal and vertical positions.
- 30        4. The trailer as recited in claim 3 wherein first section of said first and second rails are further characterized by a guides respectively located

adjacent said first sections, said each gate on receipt of a lateral force moving into engagement with a guide to limit the communication of said lateral force into said first and second roller arrangements of said each gate.

5. The trailer as recited in claim 4 wherein said first sections of first  
and second rails are further characterized by being offset from each other  
such that a resulting stall is ramped with respect to said first and second side  
walls.

10. 6. The trailer as recited in claim 5 wherein each roller of said roller  
arrangements is characterized by a cylindrical head with a shaft extending  
therefrom, said shaft being retained in a bearing in said each gate,

7. The trailer as recited in claim 6 wherein said bearing is further  
characterized by retaining said shaft and bearing in perpendicular alignment  
with respect to a corresponding rail.

15. 8. The trailer as recited in claim 7 wherein said each gate is further  
characterized by locking means that engage said first and second rails to  
retain said each gate in either a horizontal or vertical position.

9. The trailer as recited in claim 8 wherein said each gate is further  
characterized by a curtain means attached to said roof and extendable  
therefrom to limit the visibility from said individual stall.

20. 10. The trailer as recited in claim 3 wherein said third section of each  
rail has a forward and an aft branch such that said first section of each rail is  
connected to successive sections such that said each gate may be moved in  
either a forward or aft direction when said each gate is in a storage position.

25. 11. The trailer as recited in claim 4 wherein said guides are further  
characterized by resilient means on which a gate rests in a horizontal position  
to attenuate noise that may occur when a trailer is traveling on a rough road.

30. 12. A trailer for transporting a plurality of animals, said trailer having a  
floor with first and side walls that extend therefrom and a roof attached to the  
side walls to define an enclosed structure, said enclosed structure having a  
rear door for egress onto the floor and a forward door in at least one of said  
side walls, said floor being divided by a plurality of ramped gate assemblies,  
each gate in said plurality of gate assemblies is characterized by a

- rectangular frame having first and second bearing surfaces on a first side and third and fourth bearing surfaces on a second side, said first and second bearing surfaces being positioned to be in a perpendicular alignment with said first wall and said third and fourth bearing surfaces being positioned in a
- 5       perpendicular alignment with said second wall, a plurality of roller means each having a head with a shaft respectively retained in one of said first, second, third and fourth bearing surfaces; a first rail assembly attached to said first side wall with a plurality of first vertical sections connected to a plurality of first horizontal sections by first splitter sections to define a first
- 10      continuous rail member, a second rail assembly attached to said second side wall with a plurality of second vertical section connected to a plurality of second horizontal section by second splitter sections to define a second continuous rail member, said first and second vertical sections in said first and second continuous rail members being offset from each other with
- 15      respect to rear door, said first and second rollers in each gate being retained in one of said first vertical sections of said first rail assembly and said third and fourth rollers on each gate being retained in one of said second vertical sections of said second rail assembly such that with said gate is located in a horizontal position to define a ramped individual stall defined within said
- 20      enclosed structure, said each gate being moved from said horizontal position to a vertical position by said first and second rollers moving in said first continuous rail and said third and fourth rollers moving in said second continuous rail to a horizontal section to eliminate said individual ramped stall within said enclosed structure.
- 25      13. The trailer as recited in claim 12 wherein said gate assemblies include a number of said each gate to provide for the development of a corresponding number of individual stalls.
- 30      14. The trailer as recited in claim 13 wherein said each gate may be retained in either a forward or rear section of said horizontal section of said first and second continuous rail members such that access to an individual stall may be from either said rear or forward door.